



## DISK HOLDER

This application claims the benefit of Taiwan application Serial No. 92132647, filed Nov. 20, 2003.

## BACKGROUND OF THE INVENTION

## 5 Field of the Invention

**[0001]** The invention relates in general to a type of disk holder, and more particularly to a type of case with increased structural strength between the connection of the base and the lid.

## Description of the Related Art

- 10 **[0002]** Please refer to FIG. 1 which is a layered diagram of traditional disk holder. In FIG. 1, the disk holder 100 includes a base 102, a lid 104, and a disk fitting structure 120. The base 102 includes a bottom plate 102e, a front panel 102a, a rear panel 102b and side panels 102c and 102d. The bottom plate 102e, the front panel 102a, the rear panel 102b and side panels 102c and 102d form a compartment 102f. The conjunctions of the front panel 102a and the side panels 102c and 102d each has a corner indent 108. Each corner indent 108 has a pivotal wall 110 which includes a pivotal aperture 112. A pivotal arm 114 is extended from each of the two neighboring corners of the
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lid 104. The inner wall of each of the pivotal arm 114 has a pivot shaft 116 that is used to fit into the corresponding pivotal aperture 112 so that the lid 104 can be opened from and closed on the base 102.

**[0003]** The disk fitting structure 120 is pressed tight on the base 102, and total area covers the opening of the compartment 102f. The disk fitting structure 120 includes a disk fitting portion 102a that is used to buckle the disk to the disk fitting structure 120 by the fixation hole in the disk. Furthermore, an insert slip 124 can be clipped into the compartment 102f by the base 102 and the disk fitting structure 120. Another insert page 122 can be inserted through several protruding blocks of the lid 104 into the inner side of the lid 104.

**[0004]** Please note that the traditional design of pivotal arm 114 protrudes out of the lid 104 so that the pivotal arm 114 can be easily cracked by external force. Furthermore, the sides of the disk fitting structure 120 needs to tightly press on the front panel 102a, the rear panel 102b, and side panels 102c and 102d in order to secure the insert slip 124 inside the compartment 102f. This design increases the material cost of the disk fitting structure 120 and at the same time reduces the convenience of changing the insert slip 124.

## SUMMARY OF THE INVENTION

**[0005]** It is therefore an object of the invention to provide a type of disk holder. The design to have pivot shafts and pivot holes on the pivot portion of the base, and the baffle of the lid respectively can effectively increase structural strength of the connection between the base and the lid and reduce the possibility to crack the pivotal arm by external force. Furthermore, the design of using the disk fitting structure to partially cover the inner surface of the base is freed from the constraint of having to use the margin of the disk fitting structure to press the insert slip on the base, and therefore can reduce the material cost and make it easier to change the insert slip.

**[0006]** It is an object of the invention to provide a type of disk holder that includes a first case body, a second case body and a disk fitting structure. The first disk body includes a first bottom plate, a pivot portion, a first pivot shaft, and a second pivot shaft. The first bottom plate includes a first inner surface which has a first side and an opposite second side. The pivot portion is connected to the first side and is on the first inner surface. The pivot portion includes a first pivot lateral surface, and an opposite second pivot lateral surface. The first pivot shaft and the second pivot shaft are on the first pivot lateral surface and the second pivot lateral surface respectively. The second case body includes a second bottom plate, a first baffle, and a second baffle.

The second bottom plate includes a first second inner surface which includes a third side and an opposite forth side. The first baffle is connected to the third side and is on the second inner surface. One end of the first baffle includes a first pivot hole that is used to fit the first pivot shaft. The second baffle is connected to the forth side and is on the second inner surface. One end of the second baffle includes a second pivot hole that is used to fit the second pivot shaft so that the second base body can be opened from or closed on the first case body with the inner surfaces of them facing each other. The disk fitting structure is buckled onto the first base body. The disk fitting structure is used to fix a disk on the first inner surface and covers partially the first inner surface.

**[0007]** It is another object of the invention to provide a disk holder that includes a base, a lid and a disk fitting structure. The base includes a pivot portion of which the two pivot lateral surfaces opposite to each other, each includes a pivot shaft. Each of the two opposite sides of the lid connects to a baffle. One end of each of the baffle includes a pivot hole for that the corresponding pivot shaft can be fitted in so that the lid can be closed on or opened from the base with the inner surfaces of them facing each other. The disk fitting structure is buckled onto the inner surface of the base and is used to fix a disk. The disk fitting structure covers partially the inner surface of the base.

**[0008]** Other objects, features, and advantages of the invention will become apparent from the following detailed description of the preferred but non-limiting embodiments. The following description is made with reference to the accompanying drawings.

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## BRIEF DESCRIPTION OF THE DRAWINGS

**[0009]** FIG. 1 is a layered diagram of traditional disk holder.

**[0010]** FIG. 2 is a layered diagram of a disk holder according to the preferred embodiment of the invention.

**[0011]** FIG. 3A is the vertical view diagram of the base in FIG. 2.

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**[0012]** FIG. 3B is a cross-sectional view of the base along the cross-sectional line 3B-3B' in FIG. 3A.

**[0013]** FIG. 4 is the vertical view diagram of the lid in FIG. 2.

**[0014]** FIG. 5 is the vertical view diagram of the disk fitting structure in FIG. 2.

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## DETAILED DESCRIPTION OF THE INVENTION

**[0015]** Referring to FIG. 2, a layered diagram of the preferred embodiment of the invention is shown. In FIG. 2, disk holder 500 includes a disk fitting structure 400 and two case bodies such as a base 200 and a lid 300. The lid 300 is pivoted on the base 200 so that the lid 300 can be opened from and closed on the base 200. The disk fitting structure 400 can be buckled onto the base 200.

**[0016]** FIG 3A is the vertical view of the base in FIG 2, and FIG 3B is a cross-sectional view of the base along the cross-sectional line 3B-3B' in FIG. 3A. In FIG 2, the base 200 includes a bottom plate 202, a pivot portion 208, pivot shafts 218 and 220, a baffle 212, and ribs 230 and 232. The bottom plate 202 includes an inner surface 204 which includes a first side, a second side, and an opposite third side and an opposite forth side. The pivot portion 208 and the baffle 212 are connected respectively to the first side and the second side of the inner surface 204, and they are both on the inner surface of inner side 204. The pivot portion 208 includes pivot lateral surfaces 209, 216, and 214. The pivot lateral surface 209 is connected to the pivot lateral surfaces 214 and 216. The inner side of the pivot lateral surface 209 is adjacent to the inner surface 204. The pivot shaft 218 and 220 are on the pivot lateral surfaces 214 and 216 respectively. The pivot lateral surface 209 includes at least a pivotal aperture and a protrusion such as two buckle holes 226 and two protrusions 222. The protrusion 222 is a first distance away from

the inner surface 204. The side of the baffle 212 facing the pivot lateral surface 209 includes a pivotal aperture and a protrusion, such as the two pivotal apertures 228 and protrusions 224. The protrusion 224 is a second distance away from the inner surface 204 wherein the first distance is equal to the second distance. The ribs 230 and 232 are connected to the third side and the forth side of the inner surface respectively, and are located opposite to each other on the inner surface 204. Furthermore, the ribs 230 and 232 can each includes at least a protrusion that is a distance away from the inner surface.

**[0017]** FIG. 4 is a vertical view of FIG. 2. In FIG. 2, it shows the lid 300 includes a bottom plate 302, baffles 308 and 310, and ribs 316 and 318. The bottom plate 302 includes an inner surface 304. The inner surface 304 includes a first side, a second side, and an opposite third side, and an opposite forth side. The baffles 308 and 310 are connected to the third side and the forth side of the inner surface 304 respectively, and they are on the inner surface 304. One of the ends of the baffles 308 and 310 include pivotal apertures 312 and 314 respectively. The pivotal apertures 312 and 314 are used to connect to the pivot shaft 218 and 220 so that the lid 300 can be opened from and closed on to the base 200 with the inner surface 304 facing inner surface 204. The ribs 316 and 318 are connected to the third side and the forth side of the inner surface 304, and are located at the opposite end of

the inner surface 304. Furthermore, the ribs 316 and 318 can each has at least a protrusion, such as the two protrusions 320 and 322 in FIG. 2. The protrusions 320 and 322 are a distance away from the inner surface 304. Furthermore, the baffle 308 and 310 can each has at least a protrusion that is a distance away from the inner surface 304. The margin of the insert slip can be pressed and attached on the inner surface 304 by the protrusions 320 and 322.

**[0018]** Referring to FIG. 5, it is a vertical view of the disk fitting structure in FIG. 2. Please also refer back to FIG. 2, the disk fitting structure 400 is buckled onto the inner surface 204 of the base 200. The disk fitting structure is used to fix a disk. The disk fitting structure 400 covers partially the inner surface 204. Wherein, the disk fitting structure could be for example a rectangular structure. The disk fitting structure 400 includes a body 402, a fitting portion 408, and at least a buckle such as the two buckles 410 and 412 in FIG. 5. The body 402 includes a disk supporting surface 407, and sides of the body 404 and 406 that are opposite to each other. The disk supporting surface 407 is connected to the sides of the body 404 and 406. The disk supporting surface 407 is used to load the disk and its area is smaller than that of the inner surface 204. The fitting portion 408 is on the disk supporting surface 407 and is used to fix the disk through the fixation hole. The buckle 410 and 412 are located on the sides of the body 404 and 406 respectively,



and are used to buckle the buckle holes 226 and 228 respectively so that the disk fitting structure 400 is fixed on the base 200. The insert slip can be inserted between the disk fitting structure 400 and the inner surface 204 because there is a distance in between them, and the margin of the slip can be pressed by the protrusions 222 and 224 so that the slip can attach to the inner surface 204.

**[0019]** The invention does not need to be limited to the above description. For example, the bottom plate 202, the pivot portion 208, the pivot shafts 218 and 220, the baffle 212, the ribs 230 and 232, and the protrusions 222 and 224 can be made into a whole single unit. Furthermore, the invention could also include a buckle and a corresponding buckle hole on the sides of the body 404 and 406 of the disk fitting structure 400, and the pivot portion 208 and baffle of the base so that the disk fitting structure 400 can also be fixed on the base 200. Furthermore, the material for the base and the lid can be transparent such as polystyrene or be colored.

**[0020]** The design, according to the embodiment, to have pivot shafts and pivot holes on the pivot portion of the base, and the baffle of the lid respectively can effectively increase structural strength of the connection between the base and the lid and reduce the possibility to crack the pivotal arm by external force. Furthermore, the design of using the disk fitting

structure to partially cover the inner surface of the base is freed from the constraint of having to use the margin of the disk fitting structure to press the insert slip on the base, and therefore can reduce the material cost and make it easier to change the insert slip.

5     **[0021]**     While the invention has been described by way of example and in terms of a preferred embodiment, it is to be understood that the invention is not limited thereto. On the contrary, it is intended to cover various modifications and similar arrangements and procedures, and the scope of the appended claims therefore should be accorded the broadest interpretation so  
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